Federal peer review may be overstretched and error prone

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The federal peer review system, by which research proposals are judged worthy for funding, may be "over stretched" and "susceptible to error," said Elmer Yglesias, a researcher at the Science and Technology Policy Institute and author of "Improving Peer Review in the Federal Government," published in the current issue of *TECHNOLOGY & INNOVATION*, Proceedings of the National Academy of Inventors.

According to Yglesias, the federal peer review system is awash in an increasing number of funding proposals, leaving him to wonder if the peer review system is up to the challenge.

"Indications are that the system is over stretched," said Yglesias. "In addition, the number of U.S. researchers qualified to perform these reviews is not only limited, but declining as well. With fewer reviewers, funding decisions are more susceptible to error."

Not unlike a systematic check might be instituted for an engineering quality issue, Yglesias recommends a system of "calibration" to mitigate undesired outcomes. Calibration, he suggested, might prevent three kinds of errors: errors occurring because a proposal is selected for funding when it should not have been because of the reviewers failing to get good instructions and, second, errors occurring because reviewers were biased and swayed the panel. A third kind of error comes from over confident reviewers.

"This error occurs because some reviewers are correct far less than they

think," commented Yglesias.

For Yglesias, the peer review system can be improved and validated through "calibration," which he defines as the use of specific measurement techniques compared to a standard. Providing standard examples to reviewers and running mock reviews would help, he added.

"Unfortunately, not many program officers are trained to facilitate a calibration," said Yglesias. "Also, it requires extra time and resources."

For a calibration program, he recommends "Calibrated Peer Review", a web-based program developed at UCLA through which student writing assignments are graded by student peers.

"It would not be difficult to conceive a similar system to calibrate the review of scientific proposals," he concluded.

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http://www.cognizantcommunication.com/filecabinet/Technology/techinnovation.html

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